

HeatWork[®]
industrial heating solutions

Scandinavian design and quality

**HeatWork
Concept**



Local presence, outstanding service and high quality

HeatWork AS has developed a unique heating/thawing concept and is the only manufacturer of this system in Europe. As a company, we focus on having a local presence and providing outstanding service and high quality products. Our machines are manufactured in compliance with European standards and norms, and these mobile power plants are ideal for a variety of applications: thawing frozen ground, curing concrete, frost prevention, heating buildings, providing hot water to district heating installations, etc.

HeatWork's headquarter and factory are located in Narvik, Norway, and its state-of-the-art factory premises cover an area of 3300 m². HeatWork's customers are primarily heavy equipment contractors, enterprises from the petroleum industry and district heating industry, landscape gardeners, rental companies, power companies, public agencies and enterprises in the contracting industry. HeatWork has branches in several countries.

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For more information/brochure material, go to heatwork.com

Mobile heating solutions for use year-round – anywhere!

The key component in HeatWork's system is the mobile heating solution. HeatWork relies on patented hydronic technology as an energy carrier. This means most problems can be solved by providing the necessary heat, either by contact heat, or by exchange to hot air.

Since HeatWork's systems are closed, there is no water or humidity introduced to the environment during the thawing or heating process.

HeatWork's mobile heating solutions are extremely efficient and comply with the most stringent cost-efficiency and HSE requirements.

The machines can provide output temperatures of **0–100°C**, and can operate without access to mains power.

The machines are mobile and lightweight, and can be easily transported between job sites using regular vehicles, helicopters, tractors, etc.

Areas of application:

Thawing frozen ground and structures:

- Water supply and sewage systems
- Cable trenches
- Sumps, foundations and floor areas
- Roofs and coverings
- Snow and ice removal

Heating/dehumidifying:

- Buildings under construction/-rehabilitation
- Storage and multi-purpose halls
- Water damage
- Work tents
- Curing concrete

Frost prevention:

- Pavement surfaces
- Sand and levelling material
- Backfill
- Pipelines
- Railway switches
- Floats

Pre-heating:

- Areas for cast concrete
- Formwork and casting frames
- Hollow core slabs
- Rock and bedrock in anchorage work

FrostHeater

HW 1800 - HW 3600 - HW MY35
HW CONTAINER



TILLEGGSPRODUKTER:

HW Winter-Insulation
HW Tarpaulin
HW Aerotempere
HW Xtra Trommel
HW Ice Guard Systems



The most effective ground thawer on the market

HW 3600 | HW 1800 | HW MY35

Winter has traditionally been a "waiting period" in the construction industry. Using HeatWork, you gain a competitive advantage, and can work year-round, regardless of weather conditions. Our customers avoid having to cease production and laying off their employees.

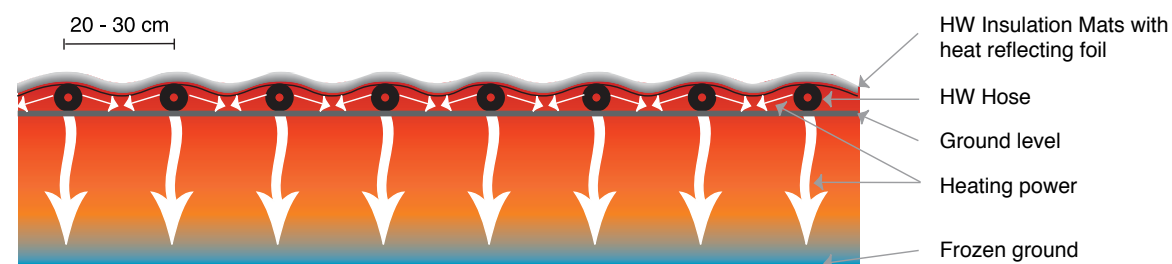
We can help you get ahead of other competitors in the market!

HeatWork is synonymous with quality in the construction industry. Our user-friendly and efficient machines, which are also cost-efficient, have set the standard for thawing frozen ground and frost-prevention.

HW FrostHeater is the most environmentally-friendly and cost-efficient thawing and heating solution on the market.

All of our machines have adjustable temperature ranges up to **100°C**, weighing in at 850 kg and up.

This is how ground thawing works



- 1** Flexible heating hoses are laid down across the area you need to thaw, cure or protect from frost
- 2** HW heat-transporting fluid (VTV) circulates in a closed system, transferring heat directly to the ground.
- 3** The hoses are covered with reflective HW insulation mats to maximize heat transfer and minimize heat loss.
- 4** The moisture in the ground heats up and melts, thawing the ground out quickly and efficiently, at a depth of 20–80 cm per day, depending on the composition of the material.
- 5** The machine can operate unattended until the job is complete. With the help of a GSM monitoring unit, operators will be notified if there is a problem.

Concrete work year-round

HW Concrete Systems = **hydronic technology for optimum results**

HeatWork's machines can be used to thaw frozen ground, melt ice and snow, and preheat reinforcement and formwork prior to pouring. Major contractors, both in Norway and abroad, have been extremely pleased with HeatWork's solutions for concrete work.

Their feedback indicates that the technology has helped them save both time and money in their projects, in addition to ensuring high quality in the final results. It is much easier

to document that the concrete work has been completed in accordance with national standards for winter curing.

HeatWork's versatile hydronic technology means you can introduce and distribute energy in the form of heat exactly where you need it.

Research

A research project involving Statnett, the Northern Research Institute (Norut) and

HeatWork yielded remarkable results. By including HeatWork's system of hydronic heating in the casting process, it is possible to cast concrete and ensure high-quality results regardless of the outside temperature.

Read more about the project at: heatwork.com/broshures/

HeatWork offers complete solutions and materials!

Areas of application:

- Thawing frozen ground before compaction at building sites
- Pre-heating rock and bedrock in connection with anchorage work
- Melting snow and ice from foundations, formwork and reinforcement
- Controlled curing of concrete
- Heating helicopter skip
- Shotcrete – preheating structures
- Cooling/heat distribution in large structures





Heating with hydronic technology – environmentally friendly and cost-efficient

HW Aerotempere - comfort and safe heating

HeatWork's mobile heating solutions provide efficient heating for buildings, tents, garages, etc., during construction, rehabilitation or reconstruction works.

HW Aerotempere is quiet and distributes heat evenly.

Hydronic energy is cost-efficient, does not contaminate the air inside, and does not constitute a fire hazard. The system does not create excess pressure within the building during operation.

HW Aerotempere connects easily to any of HeatWork's mobile heating solutions or to a central or district heating system.

The system requires minimal maintenance and monitoring, and is extremely reliable.

HSE

HeatWork complies with stringent requirements for indoor environments and provides energy-efficient heating without introducing humidity, odours or fumes to the indoor environment.

Other benefits

- No fuel spills
- Does not burn dust
- Does not tax temporary power supply
- Does not consume oxygen inside the building
- Thermostat control 0–100 °C

Areas of application:

- Heating buildings/workshops/tents/garages/halls, etc.
- Temporary operation of underfloor heating systems
- Temporary operation of central heating systems
- Operation of hydronic under-street heating systems/snowmelt systems/courtyards, etc.
- Hot water for consumption
- Rehabilitation/reconstruction
- Dehumidifying buildings
- Extermination: bedbugs, etc.
- Drying grain/hay, etc.

New builds – Rehabilitation – Reconstruction

Heating • Drying • Temperature control • Dehumidifying • Air evacuation



Heating structures: 13,000 m³ of air. Consumption: 2.9 l/h (on average)



Heating tents during pouring of concrete slabs



Heating greenhouses

HW Air Booster

Powerful fans for drying and transporting air and heat.





Statkraft Varme: Heating and hot water to major apartment complexes in Trondheim, Norway.



Agder Energi: Hot water for 200 apartments, a senior's centre and commercial spaces, Kristiansand, Norway.

Hot water on wheel

HW **HydroHeater** - designed to provide **hot water** for various purposes

HW **HydroHeater** was developed in collaboration with leading district heating companies, and is an excellent choice for anyone who needs to heat **large quantities of water quickly**.

The HydroHeater is compact, and can easily be transported to the site using a regular vehicle. No additional components are necessary to operate this machine. User-friendly and innovative solutions allow this machine to be quickly and **easily connected to auxiliary exchanges or heat exchanges in buildings**, without end users experiencing interruptions or inferior quality in their supply of water or heating.

The machine has been designed for use year-round. The water components are

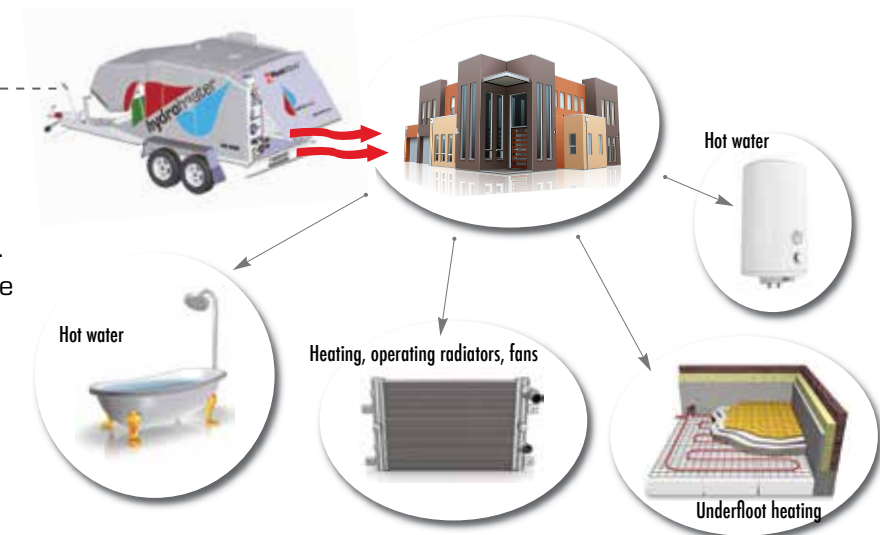
easily protected from frost by a self-draining feature after use. Water temperatures can be adjusted as needed between **0 and 100°C**.

Ground thawing and heating

The HydroHeater can also be used to thaw frozen ground and provide heat, and its performance in this regard is just as good as HeatWork's other machines.

Areas of **application**:

- Temporary supply of energy to buildings when the district heating system has to be shut down for interruptions or maintenance.
- Preheat district heating pipes to compensate for theme/expansion
- Underfloor heating—temporary heating
- Operating radiators and heating fans
- Production of hot water for ingestion or consumption
 - E.g.: enough hot water for 100 people to shower every hour



HydroHeater
HW 3600



TILLEGGSPRODUKTER:

HW Winter-Insulation
HW Tarpaulin
HW Aerotempere
HW Xtra Trommel

Capacity, flexibility and user-friendliness

make **HydroHeater** the first choice for anyone who needs a temporary hot water supply!

- Armed forces
- Plumbers
- District heating companies
- Rental companies/event organizers
- Civilian preparedness
- etc.

Please go to HeatWork's website, heatwork.com for reference projects





Statoil: Europe's first facility for LNG export from Snow white, Hammerfest, Norway.



Russia's largest concrete platform to Sakhalin 1, NAKHODKA

Maintenance and modification work

HW **PetroHeater** - Safe supplier to the petroleum industry

HW **PetroHeater** has been fitted with special components and solutions, which means the machine can be used on oil and gas installations in compliance with the stringent safety requirements that apply.

The **technology** has already been implemented by oil companies and ISO-suppliers (suppliers of insulation, scaffolding and surface treatment services) in Norway and abroad, in connection with surface treatments in flammable and explosive environments.

Using **hydronic technology**, the HW PetroHeater can transport up to 103kW of energy, e.g. to a work tent with Aerotempers to heat and dehumidify the air inside the tent.

Larger structures can also be efficiently pre-heated, with the help of contact heat from the hoses, where fluid circulates at temperatures of up to **100°C**.

These machines have also proven extremely useful in clearing snow/ice and protecting processing plants from frost.

Major advantages with the HW **PetroHeater**

For the oil companies, the PetroHeater means increased continuity in maintenance and modification activities without sacrificing quality.

In addition, they avoid logistics and lodging problems, by being able to have a smaller workforce continue operations year-round instead of accommodating an influx of workers in the summer months.

By extending the season for surface treatment activities, it also becomes easier for the **ISO-suppliers** to meet time schedules, as well as to keep key personnel from leaving for other projects.

Areas of application:

- Surface treatment year-round with the help of HW Aerotempers or contact heat
- Thawing frozen valves and pipes
- Heating tank farms
- Concrete work in Arctic environments
- Ground thawing for vacuum truck and mini excavators
- Thawing frozen ground for removal of contaminated soil
- Thawing and frost-prevention of processing plant components
- Curing/frost-prevention in connection with winter curing of concrete
- Frost-prevention for docks
- Hot water for consumption
- Heating spaces



<<We have searched the globe, and we can't find a better solution>>

Harald Knutsen,
Principal Engineer Material Inspection Technology
Statoil ASA, Hammerfest, Norway

PetroHeater HW 3600



TILLEGGSPRODUKTER:

HW Winter-Insulation
HW Tarpaulin
HW Aerotempere
HW Xtra Trommel

Qualified:
HeatWork is a qualified supplier to the petroleum industry through Achilles JQS



Russia's largest concrete platform to Sakhalin 1, NAKHODKA



Surface treatment, Snow white, Hammerfest



Norwegian National Rail Administration (NNRA): Using HeatWork to frost protect railway culvert

Frozen waterways and trenches

HW **Ice Guard Systems** - thaw frozen culverts in less than **1 minute**

HW **Ice Guard Systems** is an ingenious solution for clearing frozen culverts and waterways quickly, simply and safely.

The system works by permanently **installing pipes in culverts and trenches** known to have problems with ice.

With the Ice Guard System, customers **save both time and money** when clearing frozen waterways. It also dramatically improves working conditions for those

involved in solving ice problems near roads and railways.

The solution is environmentally friendly and makes better use of the available manpower, in that several locations can be serviced in one day.

Areas of **application**:

- Thawing and clearing trenches and culverts in connection with roads and railways
- Keep rivers/trenches open
- Spot-thawing of foundations/wells/signposts, etc.

Go to heatwork.com for more solutions and areas of application



The Norwegian Public Roads Administration, in collaboration with Mesta, HeatWork and Narvik University College, has tested and documented results from operations with the HW Ice Guard System.

Read the report on heatwork.com

Ice Guard Systems



Frost prevention and insulation

HW **Winter** Insulation - **Unique insulation** with extreme durability

With 3 or 7 layers of insulating material, several dimensions and a reflective aluminium coating, these mats have unique reflective properties, reflecting radiant heat from the ground. This means the efficiency of the thawing or curing process can be optimized, both in terms of time and costs.

HeatWork Winter Insulation has been designed for use during challenging winter conditions.

The insulation mats are fitted and have reinforced surfaces, for unparalleled durability and flexibility of use. This product comes in a variety of sizes and is used for ground thawing and frost prevention. The insulating

properties and reflective bottom surface of the mats mean the heat reflecting from the ground to be thawed/frostprotected is preserved in a unique way.

- 3 or 7 layers of insulating material
- Extremely durable
- Non-absorbent
- Can be reused several times

Areas of **application**:

- Thawing frozen ground
- Insulating water and drainage pipes
- Insulating trenches
- Frost-prevention for excavated areas
- Frost-prevention for building materials
- Covering poured concrete





Service and after-sales

We service machines and **supply stock replacement parts**

As with our products, we also emphasize quality and availability in our service and after-sales activities. Along with our distributors and partners, we focus on maintaining a local presence in the markets where we have established ourselves.

Through many years of developing, producing and marketing HeatWork's products, we have built an efficient organization with unique and significant expertise.

Our experienced service technicians perform anything from service and

maintenance to troubleshooting and repairs – usually on-site with our customers, but also in the service department located at our factory. If customers have specific needs requiring adaptation of HW products, our after-sales department is happy to provide consulting services, solutions and deliveries.

All new machines from HeatWork are equipped with HW **SmartHeater** communication technology.

This allows our service technicians to proactively follow up on machines in the market, on the basis of actual operating times.

At all times, our factory keeps a full selection of original spare and expendable parts, manufactured to meet our specifications and standards.

Efficient procedures and state-of-the-art warehouse and logistics systems mean orders are processed immediately.

Our central location, in one of Norway's primary logistics hubs, means we have immediate access to shipping options – road, rail, air or sea, direct to our customers.

HeatWork has a 24-hour service line. Contact us at tel.: **+47 488 93 271**.

<<Good service is good business>>

Tommy Larsen,
Sales and after-sales manager, HeatWork



Parts & equipment



HW Filters



- Misc. filters:
- Diesel particulate filter
 - VTV
 - Diesel fuel pump filter

HW Hoses



Use original hoses. This is important for safety and results.

HW X-tra reel



For use when thawing large areas using the HW 3600. Each reel extends the thawing area by 200 m².

HW VTV-fluid



Use original fluid only. HW VTV fluid has been designed and tested for use in the machine. Review the material data sheet on our website: heatwork.com/products

User manual



Our user manual contains updated and important information relating to the HW machines.



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HeatWork headquarter and production site in Narvik, Norway – 3300 m² state of the art production facilities.

Developed, manufactured and tested for operation under the toughest conditions

HeatWork develops, manufactures and tests its machines in rough winter conditions, north of the Arctic circle in Norway. Technology and expertise are key components in the development of high-quality products and efforts to satisfy our customers' needs.

HeatWork strives to be at the forefront of technology development in our focus area. Our designs are characterized by high performance, high quality and user-friendliness.

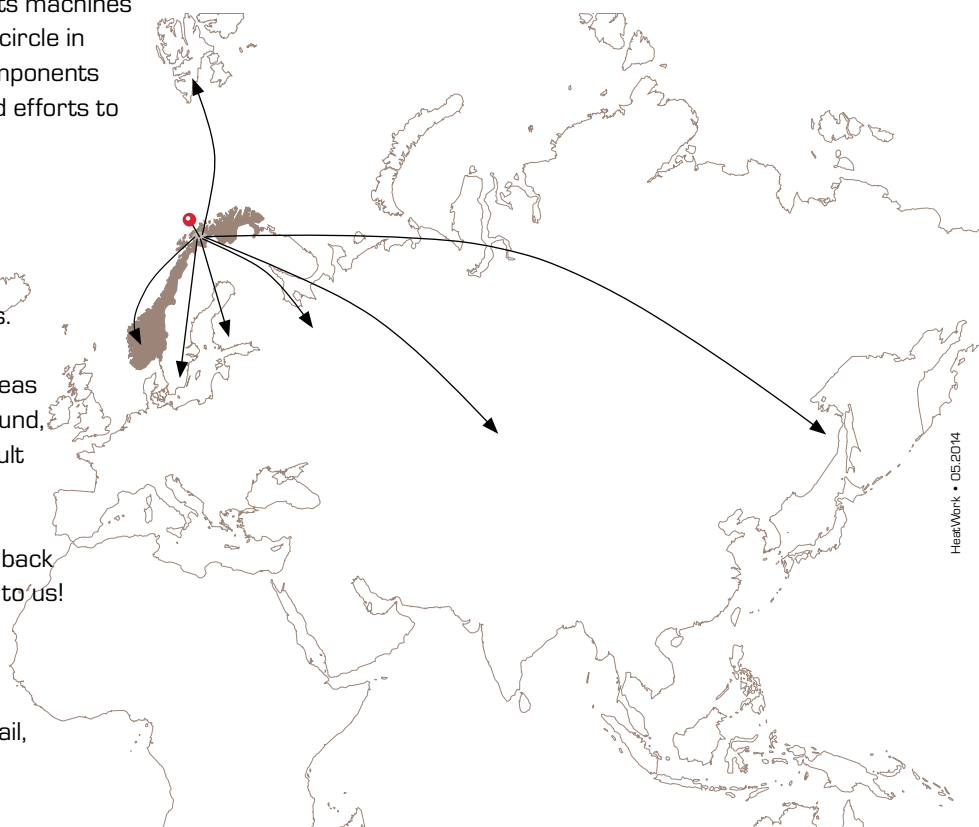
More and more customers are finding new areas of application for HeatWork machines, year-round, all over Europe. Our developments are the result of patented technology and a strong focus on R&D.

In addition, we always pay attention to the feedback we get from customers. Your opinion matters to us!

Our central location, in one of Norway's primary logistics hubs, means we have immediate access to shipping options—road, rail, air or sea, direct to our customers.



HeatWork provides technology that has earned EU's top score for energy efficiency.



HeatWork • 05.2014

*The new standard
– expect only the best!*